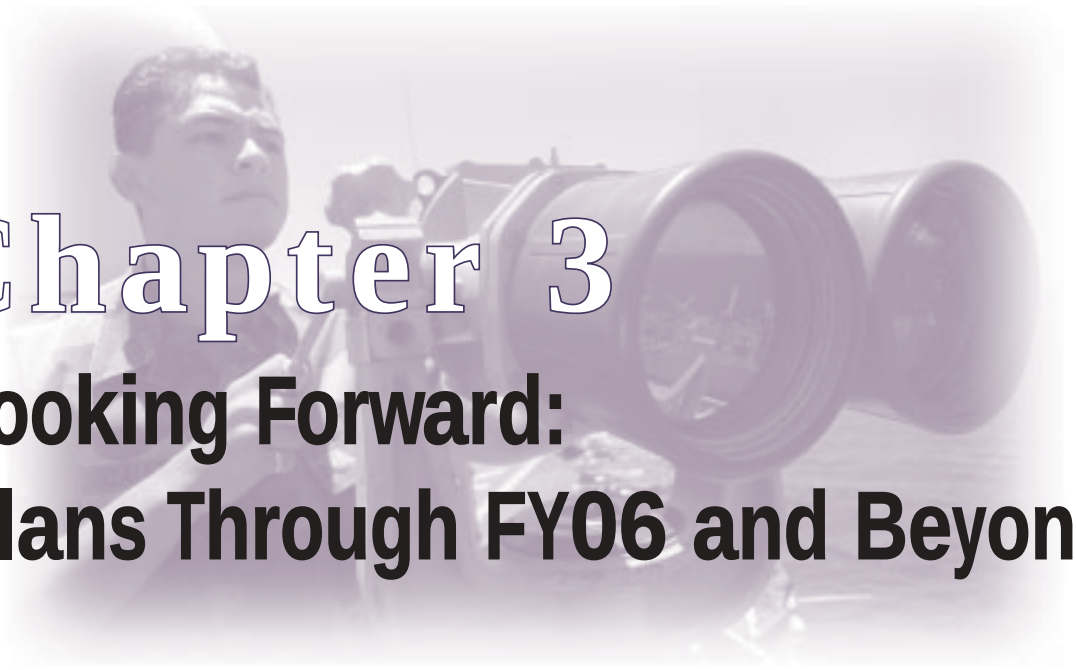


Chapter 3

Looking Forward: Plans Through FY06 and Beyond

Looking ahead over the next five years and beyond, the DON Environmental Restoration Program has numerous goals and developments in store.

- Continued progress toward successful completion of program requirements will be made through steady funding.
- New focus areas, policies, guidance, and outreach efforts will be implemented as the program evolves and progresses toward the goal of completing program requirements at all sites by 2014.
- Improved stakeholder communication will help streamline decision-making that has community and regulator acceptance.
- Establishment of a DoD Munitions Response Program (MRP) to address unexploded ordnance (UXO), waste military munitions, and chemical residues of munitions at closed, transferred, and transferring (CTT) ranges.

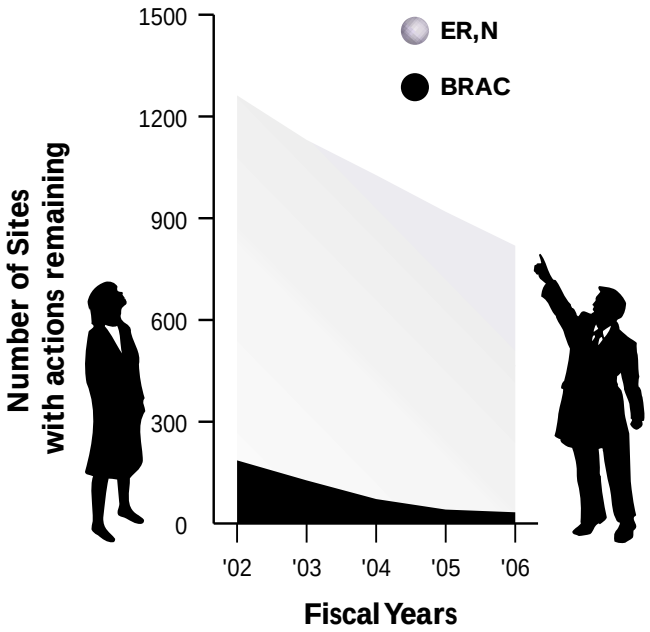


Figure 49: The Five Year Plan–Sites with cleanup actions remaining

Within the next five years, DON will continue to close out sites and entire installations, focusing on high relative-risk sites rather than medium and low relative-risk. Additionally, DON will focus on environmental restoration activities at certain medium and low relative risk sites where completing requirements will provide greater overall benefit than continued maintenance. By spending more up front to complete the cleanup, DON will save money in the long run, allowing funds to be used for addressing cleanup at larger sites. DON has a goal of completing environmental restora-

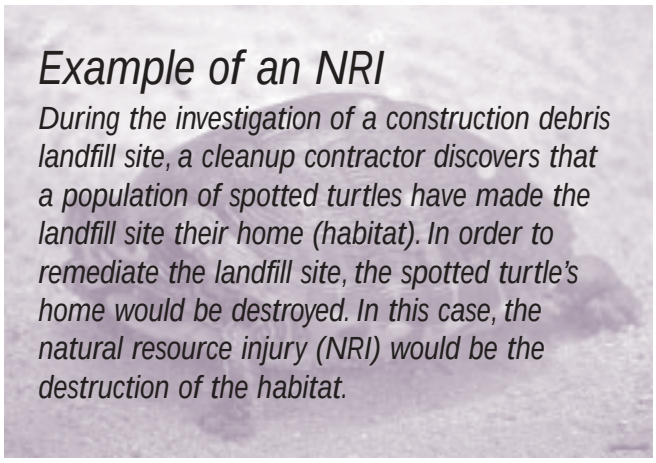
tion requirements at all DoD high relative-risk sites by 2007. In addition, over the next 5 to 10 years, DON will continue to examine methods to reduce operations and maintenance costs (including long-term maintenance), which will save money over the long term.

Achieving stakeholder input into cleanup decisions is critical to ensuring that cleanups move forward efficiently. In 2001, DON made a commitment to improve communication with stakeholders. Over the next five years, this improved communication will help DON get the work done faster and with more efficiency. We will also improve communications with our Navy family by using the Internet to share information and guidance.

New focus areas, policies, and guidance will help DON achieve its goal of completing the program. By providing clear expectations on progress to be made, the Navy can focus resources on completing the work that needs to be done to achieve its goals.

Natural Resource Injury

Natural Resource Injury (NRI) refers to a measurable adverse change in the chemical or physical quality, or the viability of a natural resource, resulting from exposure to the release of a CERCLA hazardous substance or from cleanup practices. NRI is an issue of concern within the DON Environmental Restoration Program.



Example of an NRI

During the investigation of a construction debris landfill site, a cleanup contractor discovers that a population of spotted turtles have made the landfill site their home (habitat). In order to remediate the landfill site, the spotted turtle's home would be destroyed. In this case, the natural resource injury (NRI) would be the destruction of the habitat.

ERA Considerations

During a site's ecological risk assessment (ERA), DON investigates the likelihood that a release of a CERCLA hazardous substance has injured a natural resource. It is during the ERA that DON enters into discussions with trustees to determine how to best assess the site. At the conclusion of these discussions, the ERA may assist in identifying whether the natural resource in question has been injured.

Habitat Expansion

In some cases, DON may extend a wetland or other habitat in the interest of improving the health and population of native species within a remediated area. See the success story about DON's expansion of a wetland turtle habitat at a South Weymouth, MA site (page 3-3) for an example of this in FY01.

What is NRD?

Natural Resource Damages (NRD) is the amount of money sought by natural resource trustees as compensation for injury, destruction, or loss of natural resources as set forth in section 107(a) or 111(b) of CERCLA. DON focuses on determining if there is an injury to the natural resource, but not on damages. NRD claims are typically paid by the Department of Justice (DOJ) Judgment Fund. Generally, no claims will be paid using DON Environmental Restoration cleanup funds.

Addressing NRI Through Cleanup Alternatives

DON selects cleanup technology alternatives, whenever practicable, that will result in the least amount of residual NRI. DON Project Managers carefully review all viable cleanup technology alternatives before making a selection. At the same time they consider the impact that implementing the selected cleanup technology may potentially have on the nearby natural resources. DON will try to avoid additional destruction or injury to a natural resource while cleaning up a site.

As regulations evolve and awareness of requirements increases, DON will continue to protect human health and be smart stewards of the environment.

• Success Story •

Radiotelemetry, Surveys Protect Turtles During Cleanup

South Weymouth Naval Air Station

South Weymouth, MA
NAVFAC Northeast Activity

Naval Air Station South Weymouth (NAS SOWEY), closed under BRAC IV in September 1997, is currently under caretaker status. Prior to its closure, its lands were used primarily for airfield operations, aircraft support, and reserve training.

Turtles Pose Challenge

The station was listed as a National Priority List site in 1994 as a result of metal, PCB, pesticide, and PAH/SVOC contamination at eight sites. The presence of Eastern box turtles (Figure 50) and spotted turtles (Figure 51) that make the surrounding marsh areas their home has made remediating the site more challenging.

The box and spotted turtles are state-listed Species of Special Concern in Massachusetts, and are protected under the Massachusetts Wetlands Protection Act and the Massachusetts Endangered Species Act. The Navy has been studying the turtles since 1998.

Figure 50: Eastern box turtle fitted with radio transmitter at NAS South Weymouth, MA

Figure 51: Spotted turtle, NAS South Weymouth

Turtles Monitored, Tracked

In the performance of a focused field effort to gather information, the turtles have been monitored with the use of radiotelemetry (Figure 52), and meander and trapping surveys in a mark-recapture field survey. All captured turtles are marked with a unique filed notch system that uses the marginal scutes of the top shell, or carapace, of the turtle. Each time an individual turtle is located, standard sets of data like habitat description, length of carapace, length of bottom shell (plastron), weight, sex, and approximate age are recorded. This information creates a life history profile, allowing a better understanding of how these turtles behave and where they might be located during different times of the year.

Turtle Program Publicized

The Navy has made efforts to communicate the results of the turtle program to the public through a variety of mediums, including articles in the local paper; RAB meetings; annual reports to the public; and, on one occasion a visit by a member of the public.

Figure 52: David Barclift (EFA NE) using radiotelemetry receiver to locate an eastern box turtle

"Input from the public has been used to help define the program and ensure that all areas of potential concern to the public have been thoroughly investigated for the presence of these rare turtles," said David Barclift, EFA Northeast Risk Assessor. "All feedback has been extremely positive."

• Success Story •

Landfill Covers and Fencing Protect Habitat, Environment

Barstow Marine Corps Logistics Base

Barstow, CA

NAVFAC Southwest Division

The southwest corner of the Nebo Main Base was operated as the principal solid waste landfill for Marine Corps Logistics Base (MCLB) Barstow from the early 1950s to 1964. It consists of two separate landfill areas with a former drum storage area located adjacent to the eastern landfill area. CAOC 35 is a high-risk inactive 17.4-acre landfill in the northeastern portion of the Yermo Annex. The landfill was designated as Class III, permitted to accept household refuse from the Yermo Annex and Nebo Main Base.

Landfill Near Threatened Species Area

The estimated waste volume at the landfill is 40,000 cubic yards, and the disposal area is adjacent to a habitat area for the desert tortoise, a federally listed threatened species. Suspected contamination in the area included solvents, waste oils, metals, PAHs, PCBs, and dioxins/furans.

Soil Cap Eliminates Infiltration

Monolithic native soil covers were constructed to minimize precipitation infiltration and the likelihood that future receptors could contact the wastes. The soil cap design, (Figure 53) eliminates infiltration of precipitation into the landfill and reduces leachate entry into groundwater. Gravel was placed on top to reduce weed growth and keep animals from burrowing into the cap. Institutional Controls such as fencing to prevent access by desert tortoises, and signage to warn people of hazards, have also been incorporated at the site.

Contract Vehicle Saves Government Money

The SWDIV Desert Team Solution Order Contract was utilized to obtain a fixed price contract for the construction of both soil caps. Utilizing a fixed price contract saved the government time and money. Both projects were completed on time and within budget. Money was also saved since all borrow material was produced on site.

Final Remedial Actions Complete

With the completion of the remedial actions at CAOCs 7 and 35, all remedial actions under Operable Unit 5 and 6 are now complete. Originally 22 of the 25 of CAOCs were determined to require No Further Action in the January 1998 Record of Decision (one had Institutional Controls only).

Figure 53: Completed soil cap, MCLB Barstow, CA

Revised DERP Management Guidance

In September 2001, DoD issued the revised Defense Environmental Restoration Program (DERP) Management Guidance. The revised guidance addresses, among other things, improvements to reporting environmental liabilities and estimating cost to complete, and how funds are classified for certain restoration activities. The Navy is revising its guidance to address the new requirements, and is developing briefings to train field personnel on the changes and how these changes will impact operations.

The DERP Management Guidance also establishes a Military Munitions Response Program (MRP). MRP is a new initiative that will address issues of UXO, waste military munitions, and chemical residues of munitions on CTT ranges and other areas. DON is participating in DoD's efforts to plan and budget for the cleanup of munitions sites. As the program takes shape, DON expects to organize its MRP efforts as a separate element of the cleanup program.

Munitions Response Program

In developing its MRP, DON will focus on clearly defining requirements for military munitions response requirements, and then begin to develop response actions. The revised DERP Guidance requires a comprehensive inventory of munitions sites, including the nature and extent of contamination, to be completed by the end of FY02. DON is developing guidance and metrics to meet this requirement. Over the next three years, DON will assess sites known to contain military munitions. During this time, DON will conduct a preliminary assessment at each identified range and conduct early response actions to reduce risk to the public. Our goal is to expose the minimum people to the minimum ordnance for the minimum amount of time. The budget is $8 million per year for the next five years.

Figure 54: Military munitions discovered at NAS-JRB, New Orleans

The range inventory will help define the breadth of the program. The inventory will also help define the need for technology investment. Information concerning the density, types, and locations of military munitions will allow DON to determine whether existing tools can be used for military munitions location and removal, or if new tools must be developed. Military munitions cleanup is a relatively new field. DON anticipates that improved technologies will reduce costs and enhance the ability to clean up munitions.

Between now and 2006, DON will work with DoD to clearly define requirements for military munitions cleanup and determine appropriate response actions for both land and shallow water areas.

The MRP goal is to expose the minimum number of people to the minimum amount of ordnance for the minimum amount of time.

Key elements of the process are:

- Creation of a comprehensive inventory of munitions response sites
- Preliminary assessment of each identified range
- Early response actions to reduce the risk of public exposure
- Research for a better understanding of breakdown contaminants
- Determination of regulatory applicability (CERCLA/RCRA)
- Evaluation of new and existing technologies for military munitions clearance
- Establishment of channels for open stakeholder dialogue
- Development of metrics for military munitions cleanup
- Promulgation of policy and guidance

• Success Story •

Navy Clears UXO From 225 Acres

New Orleans Naval Air Station Joint Reserve Base

New Orleans, LA
NAVFAC Southern Division

The Naval Air Station Joint Reserve Base (NAS-JRB) New Orleans is home to VP-94, VFA-204, VR-54, the Louisiana Air National Guard, U.S. Air Force Reserve, U.S. Coast Guard, and U.S. Customs Service. In July 2000, several items of UXO were discovered lying in a wooded buffer near the NAS-JRB New Orleans Magazine Area and adjacent to the existing family housing area.

These items were also close to an area slated for a new public/private venture housing development.

Figure 55: Ordnance items discovered at Naval Air Station-Joint Reserve Base New Orleans

Removal Required

It was determined that the items needed to be removed immediately because they posed a potential hazard for both construction workers and future housing occupants. In addition, there was concern that the site would become an attraction for local children. Beyond the explosive safety issues, there was the possibility of soil contamination from the fuses, explosive materials, and casings.

Public Notified

Due to the UXO concerns, a newsletter describing the issues was distributed to base housing and throughout the community. In addition, NAS-JRB New Orleans held a town hall meeting explaining the newsletter and addressing community questions. According to RPM Harold McGill, in a report on the UXO situation, "relations between the base and the surrounding community are excellent."

Figure 56: Grid system for UXO site survey

UXO Removed, Recycled

Beginning in January 2001, electromagnetic detectors were used to detect any metallic anomaly up to four feet below the surface; each anomaly is treated as potential UXO. A grid system survey (Figure 56), was used to accurately pinpoint and detect anomalies. Each anomaly was plotted throughout the grid on dig sheets and converted to excavation coordinates for final mapping. Any live ordnance found was moved to a safer location and detonated later. UXO scrap was verified as inert and recycled. To date, 225 acres have been cleared, including 33 acres cleared to a depth of four feet.

• Success Story •

Stakeholders Agree to Cost Effective UXO Site Evaluation

Figure 57: Operable Unit B, Former NAF Adak, AK

Adak Naval Air Facility

Adak Island, AK

NAVFAC Northwest Activity

The former Naval Air Facility (NAF) Adak occupied 76,800 acres on the northern portion of the island and closed operationally on March 31, 1997 under BRAC. In September 1993, the Navy, EPA, and the Alaska Department of Environmental Conservation (ADEC), signed a Federal Facility Agreement (FFA) to conduct an RI/FS and remedial design/remedial action (RD/RA) activities for chemical and petroleum sites. In June 1999, EPA and ADEC initiated formal dispute proceedings with the Navy over proposed methods for the investigation and evaluation of Ordnance and Explosives/Unexploded Ordnance (OE/UXO) sites on Adak.

Regulatory Requirements/ Community Involvement

Since its formation in July of 1999, the Operable Unit (OU) "B" Project Team, which included representatives from the Navy, EPA, the State of Alaska, U.S. Fish and Wildlife Service, the Aleut Corporation, the Aleutian/ Pribiloff Island Association, and an observing member of the community of Adak, has worked closely to resolve complex technical issues related to completing the RI/FS Work Plan. OU B is pictured in Figure 57.

Cost Avoidance Measures

Prior to the formation of the Project Team, regulatory agencies and stakeholders had insisted on 100 percent geophysical survey and clearance of all potential OE/ UX0 items over thousands of acres. Cost estimates for completion of this work under this scenario were in the hundreds of millions of dollars.

Using a partnered approach to arriving at mutually acceptable and technically practicable remedial solutions for the sites, estimated completion costs have been dramatically reduced. Agencies have accepted a representative geophysical survey (Figure 58) and investigations as the basis for determining the need for OE/UXO clearance at the site. Cost estimates for completion of remediation are currently less than $60 million for completion of all investigation and remediation.

Lessons Learned

- Stakeholders must have input into the selections of technologies/methods used for cleanup.
- The importance of integrating a complete group of stakeholders at all phases of the project to avoid derailing decisions because stakeholder concerns had not been considered.
- Retain decision-making authority with project management representatives from Navy and agencies.

Figure 58: Geophysical survey

Community Involvement

As part of its efforts to improve stakeholder communication, DON will involve communities and other stakeholders in the decision making process for munitions cleanup. Based on the success of the existing RAB program at cleanup installations, DON wants to continue partnering with communities and address public concerns in open and honest dialogue.

Technology/Knowledge Advancement

UXO/munitions management is a relatively new field, and the available detection and removal technology has limitations. Factors such as topography, vegetation, magnetic soil, and other environmental concerns, such as protecting endangered species, can hamper the technology. Particularly in the area of shallow water UXO/munitions detection and removal, DON may need to make an investment to improve the effectiveness of the technology.

Conclusion

This chapter has provided an overview of the DON Environmental Restoration Program's future plans through FY 2006, and beyond. Steady funding to maintain momentum on cleanup projects; a continued focus on closing out high relative-risk sites while also closing out medium and low-relative risk sites when economically feasible; and improving communication with, and input from, stakeholders will all help DON complete the Program on schedule.